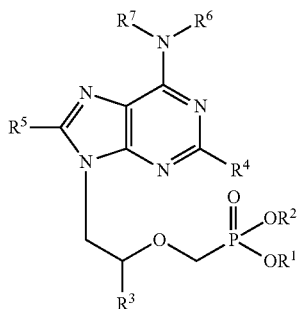


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Although certain embodiments are described in detail above, those having ordinary skill in the art will clearly understand that many modifications are possible in the claims without departing from the teachings thereof. All such modifications are intended to be encompassed within the claims of the invention.

Embodiments of the Invention

A1. A pharmaceutical composition comprising an effective amount of a compound of the formula:



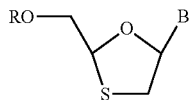
wherein R^1 and R^2 are independently selected from H, C_1 - C_6 alkyl, C_1 - C_6 substituted alkyl, C_6 - C_{20} aryl, C_6 - C_{20} substituted aryl, C_6 - C_{20} arylalkyl, C_6 - C_{20} substituted arylalkyl, acyloxymethyl esters $-\text{CH}_2\text{OC}(=\text{O})\text{R}^9$ and acyloxymethyl carbonates $-\text{CH}_2\text{OC}(=\text{O})\text{OR}^9$ where R^9 is C_1 - C_6 alkyl, C_1 - C_6 substituted alkyl, C_6 - C_{20} aryl and C_6 - C_{20} substituted aryl;

R^3 is selected from H, C_1 - C_6 alkyl, C_1 - C_6 substituted alkyl, or CH_2OR^8 where R^8 is C_1 - C_6 alkyl, C_1 - C_6 hydroxyalkyl and C_1 - C_6 haloalkyl;

R^4 and R^5 are independently selected from H, NH_2 , NHR and NR_2 where R is C_1 - C_6 alkyl; and

R^6 and R^7 are independently selected from H and C_1 - C_6 alkyl;

or a physiologically functional derivative thereof; in combination with an effective amount of a compound of the formula



wherein B is selected from adenine, guanine, cytosine, uracil, thymine, 7-deazaadenine, 7-deazaguanine, 7-deaza-8-azaguanine, 7-deaza-8-azaadenine, inosine, nebularine, nitropyrrole, nitroindole, 2-aminopurine, 2-amino-6-chloropurine, 2,6-diaminopurine, hypoxanthine, pseudouridine, 5-fluorocytosine, 5-chlorocytosine, 5-bromocytosine, 5-iodocytosine, pseudocytosine, pseudoisocytosine, 5-propynylcytosine, isocytosine, isoguanine, 7-deazaguanine, 2-thiopyrimidine, 6-thioguanine, 4-thiopyrimidine, 4-thiouracil, O^6 -methylguanine, N^6 -methyladenine, O^4 -methylthymine, 5,6-dihydrothymine, 5,6-dihydrouracil, 4-methylindole, and a pyrazolo[3,4- D]pyrimidine; and

R is selected from H, C_1 - C_{18} alkyl, C_1 - C_{18} substituted alkyl, C_2 - C_{18} alkenyl, C_2 - C_{18} substituted alkenyl, C_2 - C_{18} alkynyl, C_2 - C_{18} substituted alkynyl, C_6 - C_{20} aryl, C_6 - C_{20} substituted aryl, C_2 - C_{20} heterocycle, C_2 - C_{20} substituted heterocycle, phosphonate, phosphophosphonate, diphospho-

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phosphonate, phosphate, diphosphate, triphosphate, polyethyleneoxy or a physiologically functional derivative thereof; and a pharmaceutically acceptable carrier.

B2. A composition of embodiment A1 wherein, in formula 1, R^1 and R^2 are independently selected from H, C_1 - C_6 alkyl, C_1 - C_6 substituted alkyl, C_6 - C_{20} aryl, C_6 - C_{20} substituted aryl, C_6 - C_{20} arylalkyl, C_6 - C_{20} substituted arylalkyl, acyloxymethyl esters $-\text{CH}_2\text{OC}(=\text{O})\text{R}^9$ and acyloxymethyl carbonates $-\text{CH}_2\text{OC}(=\text{O})\text{OR}^9$ where R^9 is C_1 - C_6 alkyl, C_1 - C_6 substituted alkyl, C_6 - C_{20} aryl and C_6 - C_{20} substituted aryl; and R^3 , R^4 , R^5 , R^6 and R^7 are independently H or C_1 - C_6 alkyl.

C3. A composition of embodiment A1 wherein, in formula 2, B is cytosine or a 5-halocytosine.

D4. A composition of embodiment A1 wherein, in formula 1, R^1 and R^2 are independently selected from H, C_1 - C_6 alkyl, C_1 - C_6 substituted alkyl, C_6 - C_{20} aryl, C_6 - C_{20} substituted aryl, C_6 - C_{20} arylalkyl, C_6 - C_{20} substituted arylalkyl, acyloxymethyl esters $-\text{CH}_2\text{OC}(=\text{O})\text{R}^9$ and acyloxymethyl carbonates $-\text{CH}_2\text{OC}(=\text{O})\text{OR}^9$ where R^9 is C_1 - C_6 alkyl, C_1 - C_6 substituted alkyl, C_6 - C_{20} aryl and C_6 - C_{20} substituted aryl; and R^3 , R^4 , R^5 , R^6 and R^7 are independently H or C_1 - C_6 alkyl; and, in formula 2, B is cytosine or a 5-halocytosine.

E5. A composition of embodiment D4 wherein, in formula 1, R^1 and R^2 are independently selected from H, acyloxymethyl esters $-\text{CH}_2\text{OC}(=\text{O})\text{R}^9$ and acyloxymethyl carbonates $-\text{CH}_2\text{OC}(=\text{O})\text{OR}^9$ where R^9 is C_1 - C_6 alkyl; and R^3 , R^4 , R^5 , R^6 and R^7 are independently H or C_1 - C_6 alkyl; and, in formula 2, B is cytosine or a 5-halocytosine and R is H.

F6. A composition of embodiment E5 wherein, in formula 1, R^1 and R^2 are independently selected from H and $-\text{CH}_2\text{OC}(=\text{O})\text{OCH}(\text{CH}_3)_2$; R^3 is $-\text{CH}_3$; and R^4 , R^5 , R^6 and R^7 are H; and, in formula 2, B is 5-fluorocytosine and R is H.

G7. A pharmaceutical composition comprising a pharmaceutically effective amount of [2-(6-amino-purin-9-yl)-1-methyl-ethoxymethyl]-phosphonic acid diisopropoxycarbonyloxymethyl ester fumarate (tenofovir disoproxil fumarate) or a physiologically functional derivative thereof and a pharmaceutically effective amount of (2R, 5S,)-4-amino-5-fluoro-1-(2-hydroxymethyl-1,3-oxathiolan-5-yl)-(1H)-pyrimidin-2-one (emtricitabine) or a physiologically functional derivative thereof; and a pharmaceutically acceptable carrier.

H8. A pharmaceutical formulation of embodiment A1 to G7 further comprising a third active ingredient selected from the group consisting of a protease inhibitor, a nucleoside or nucleotide reverse transcriptase inhibitor, a non-nucleoside reverse transcriptase inhibitor, and an integrase inhibitor.

I9. A pharmaceutical formulation of embodiments A1 to H8 in unit dosage form.

J10. A method for the treatment or prevention of the symptoms or effects of an HIV infection in an infected animal which comprises administering to said animal a pharmaceutical composition of embodiments claims A1 to I9.

We claim:

1. A fixed dose combination pharmaceutical dosage form comprising 300 mg tenofovir disoproxil fumarate and 200 mg emtricitabine; a binder selected from the group consisting of povidone, gelatin, hydroxypropyl methylcellulose, cellulose, microcrystalline cellulose, starch, and acacia; a disintegrant selected from sodium starch glycolate, cross-linked-povidone, cross-linked sodium carboxymethylcellulose, and alginic acid; and a lubricant selected from the